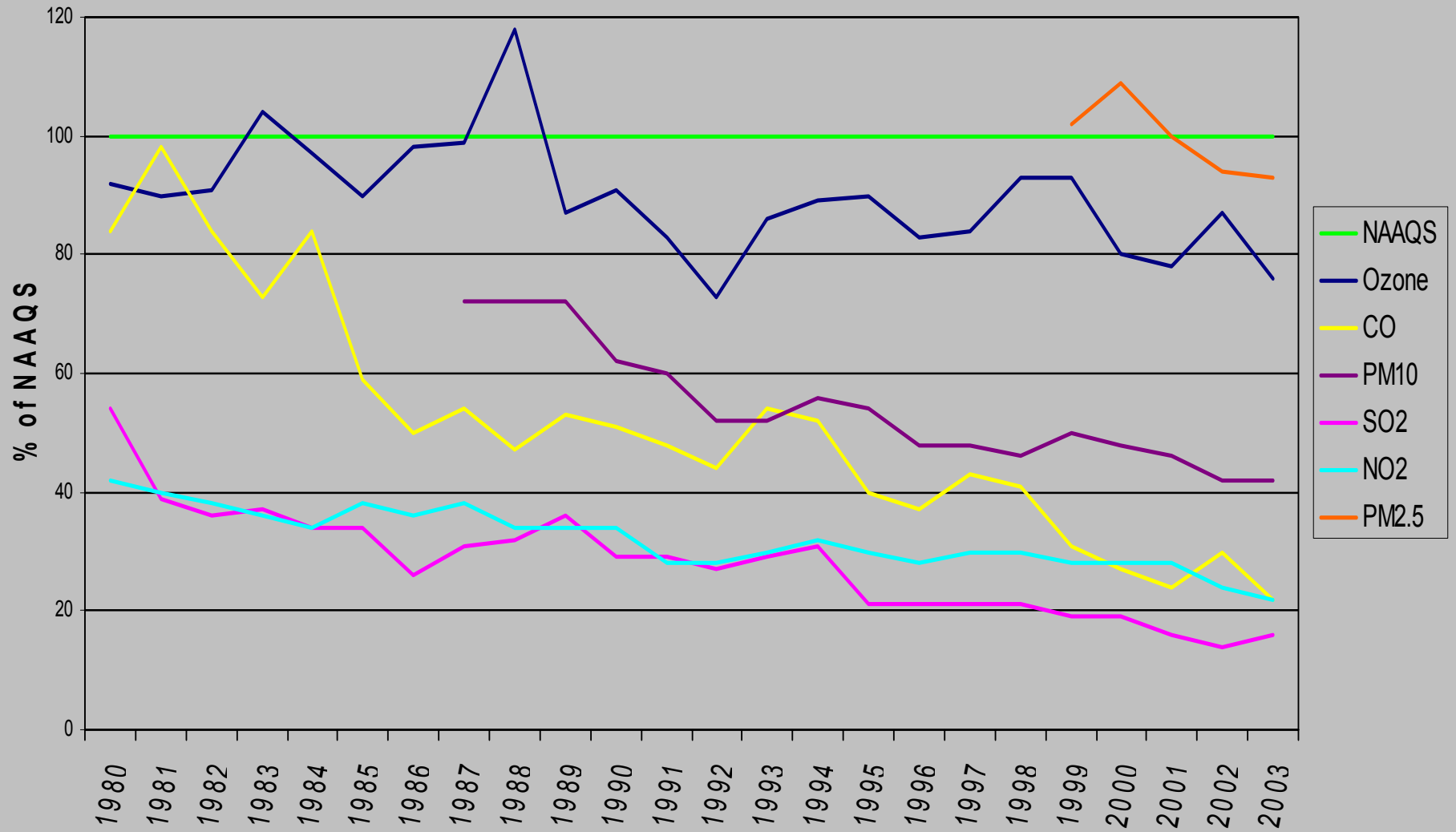


OPEN BURNING

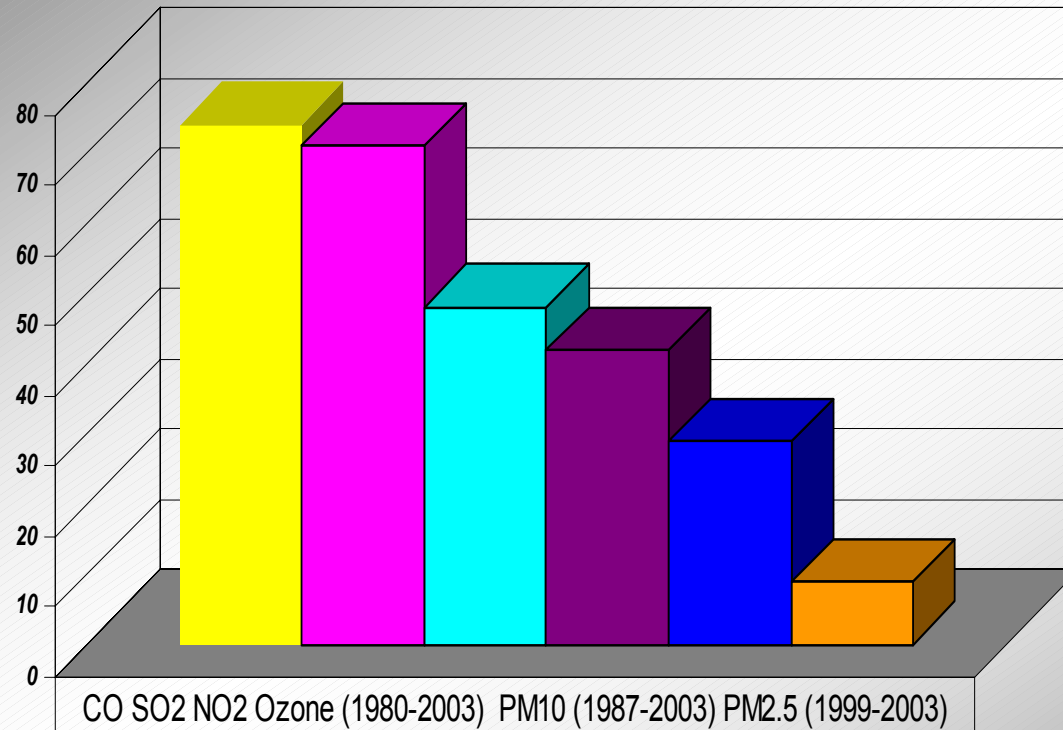
A large, dark, billowing plume of smoke or ash rises from a fire, filling much of the sky. In the foreground, there are some green trees and what appears to be a structure with a corrugated metal roof, possibly a shed or a small building, partially obscured by the smoke.

Kentucky Division for Air Quality

Kentucky Air Quality Trends



% Reductions in Kentucky

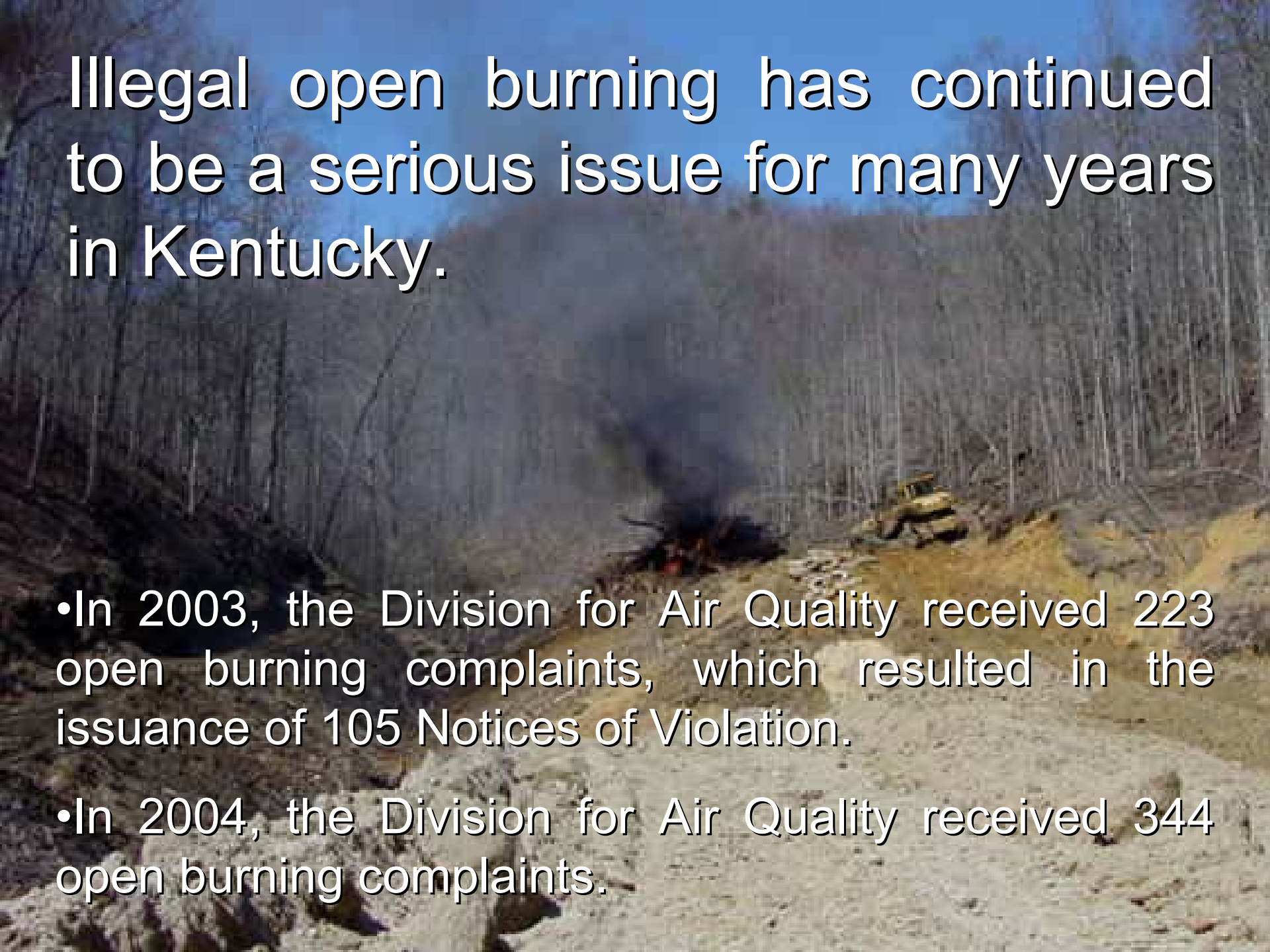


CO	74
SO2	71
NO2	48
PM10	42
Ozone	29
PM2.5	9

What Is Open Burning?

As defined by the EPA:

- Any open flame in the environment, including wildfires, camp fires, ceremonial fires, etc.



Illegal open burning has continued to be a serious issue for many years in Kentucky.

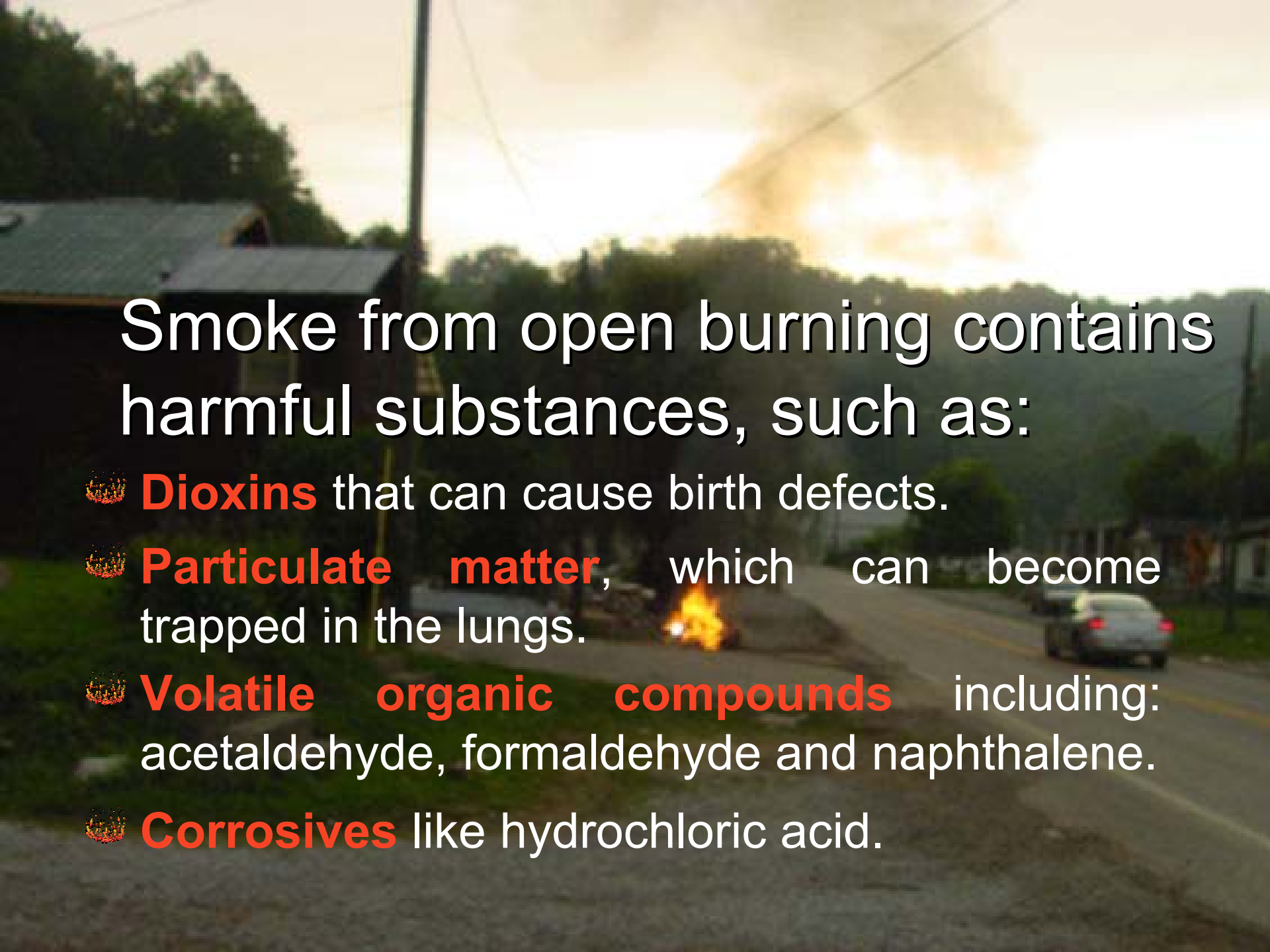
- In 2003, the Division for Air Quality received 223 open burning complaints, which resulted in the issuance of 105 Notices of Violation.
- In 2004, the Division for Air Quality received 344 open burning complaints.

Impact to Human Health

Most open burning is prohibited in Kentucky because toxic gases are often emitted, which harm human health and/or the environment.

Air pollution created from open burning can:

- Negatively impact children and adults with respiratory diseases such as asthma, emphysema, and chronic bronchitis.
- Irritate the eyes and skin, depress the central nervous system, and cause headaches, dizziness, and fatigue.

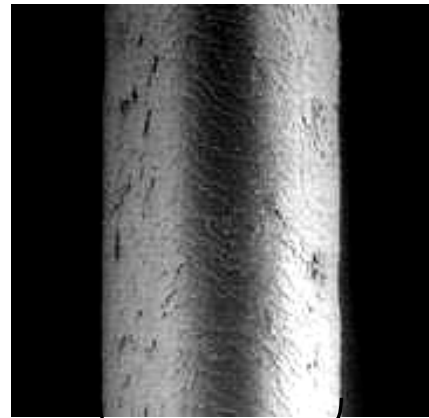


Smoke from open burning contains harmful substances, such as:

- 🔥 **Dioxins** that can cause birth defects.
- 🔥 **Particulate matter**, which can become trapped in the lungs.
- 🔥 **Volatile organic compounds** including: acetaldehyde, formaldehyde and naphthalene.
- 🔥 **Corrosives** like hydrochloric acid.

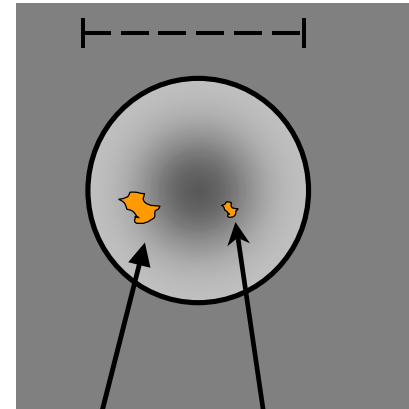
Particulate Matter: What is It?

A complex mixture of extremely small particles and liquid droplets



Human Hair (70 μm diameter)

Hair cross section (70 μm)



PM_{10}
(10 μm)

$\text{PM}_{2.5}$
(2.5 μm)

M. Lipsett, California Office of Environmental Health Hazard Assessment

- Lung irritant
- Associated with heartbeat irregularities and heart attacks
- May contain more harmful particles, such as dioxins

Dioxin

- A study conducted by EPA and the New York State Department of Health, revealed that burning ordinary household trash in a barrel generated large amounts of dioxins and furans.
- Dioxin is a persistent compound that bio-accumulates in fatty tissues.
- Exposure to dioxin can alter the fundamental growth and development of cells that can lead to:
 - Immune system suppression
 - Disruption of hormonal systems
 - Cancer

Environmental Impact

Open burning pollutes the air that we breathe, can contaminate and accumulate in water and soil, and poses a fire hazard.



Fire and Safety Hazards



A small burn. . .



Photo by John McColgan, US Forest Service Firefighter

. . .could turn into a disaster. An estimated 35-40% of Kentucky's wildfires start when open burning gets out of control.

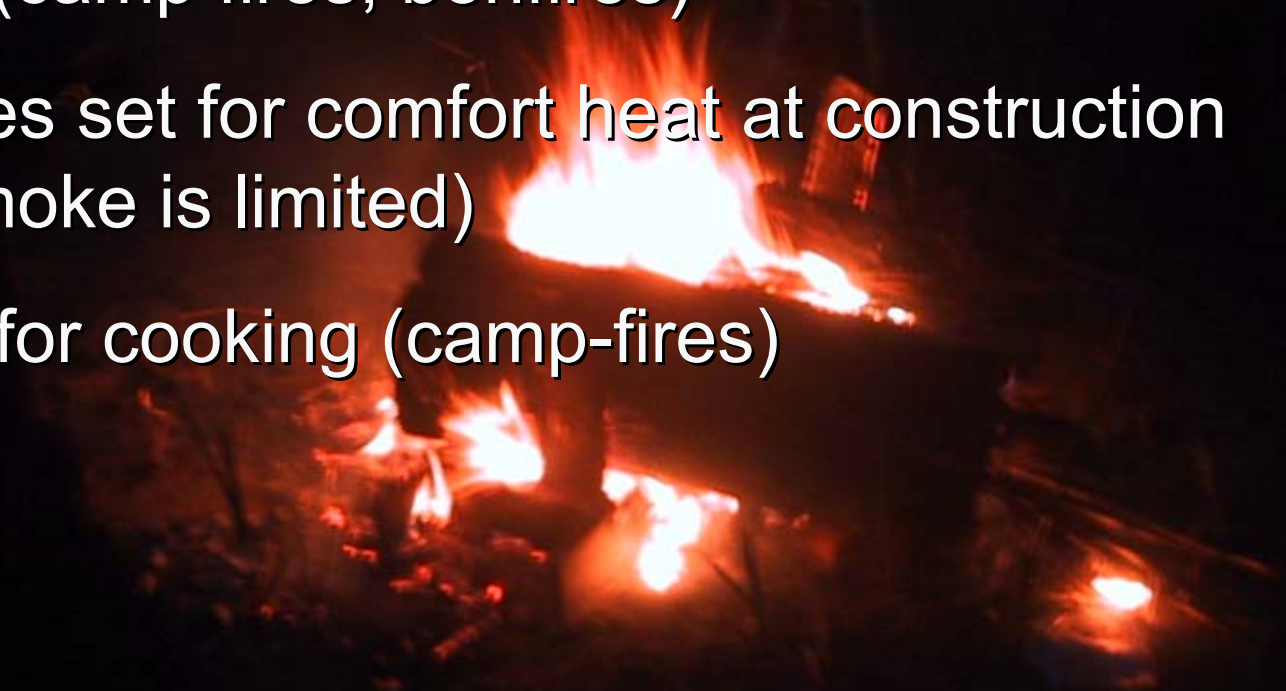


- Legal, or Illegal?

What, when, where, and how a material is burned determines if the burning is legal or illegal.

Legal Burning Activities

- Fires set for recreational or ceremonial purposes (camp fires, bonfires)
- Small fires set for comfort heat at construction sites (if smoke is limited)
- Fires set for cooking (camp-fires)



Legal Burning Activities

Burning of:

- Natural growth disturbed as part of land clearing activities (development sites, etc.)
- Trees and/or tree limbs, felled by storms

Legal Burning Activities

- Fires set to dispose of household rubbish
 - Material and trash, excluding garbage, accumulated by < five (5) family units on a daily basis, if the fires are maintained by an occupant.

Does *not* include:

- Garbage, defined as putrescible animal or vegetable matter
- Plastic materials, foam insulation, Styrofoam, etc.

Legal Burning Activities



Fires set for recognized agricultural, silvicultural, range, or wildlife management practices.

Legal Burning Activities

A photograph showing three firefighters in full protective gear (helmets, jackets, pants, and boots) practicing with a hose and nozzle. They are standing on a dark, possibly wet, surface. The firefighter on the right is holding the nozzle, spraying a large amount of water. The other two firefighters are holding the hose. In the background, there is a building with a corrugated metal roof and a window. The scene appears to be a training exercise.

Fires set for the purpose of instruction and training of firefighters.

Legal Burning Activities

- Fires set to burn leaves:
 - In cities with < 8,000 population

The following counties are not allowed to burn leaves during the ozone season:

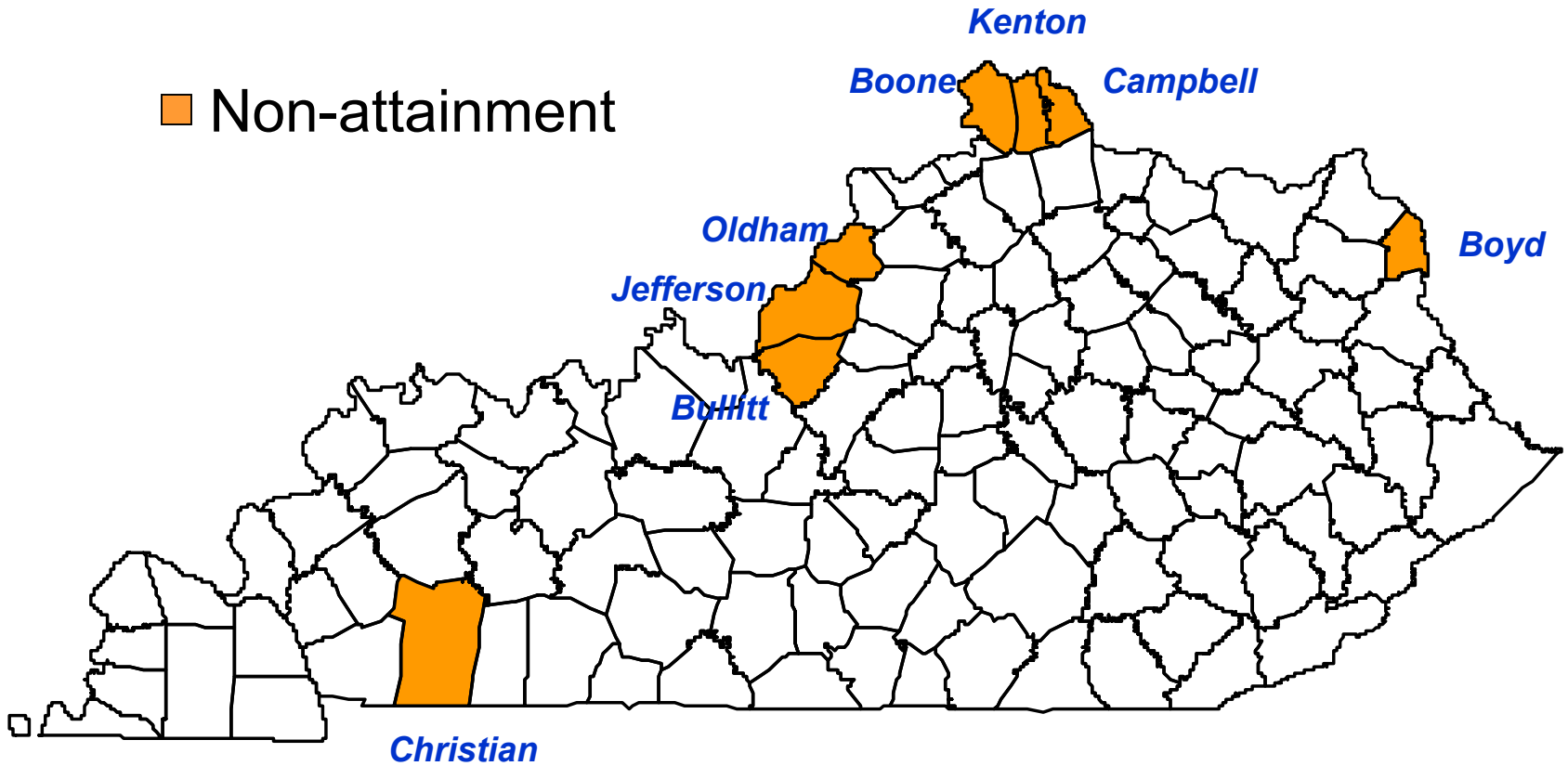
- Jefferson, Boone, Kenton, Campbell, McCracken, Boyd, Henderson, and portions of Bullitt and Oldham

When can Approved Material be Burned?

Approved materials may be burned any time,
EXCEPT:

- In non-attainment areas for Ozone, between the months of May 1- September 30
- During fire season (February 15 - April 30 and October 1 - December 15), between 6 am and 6 pm, and only when the wind is at a minimum.



EPA's 8-hour Ozone Non-attainment Designations

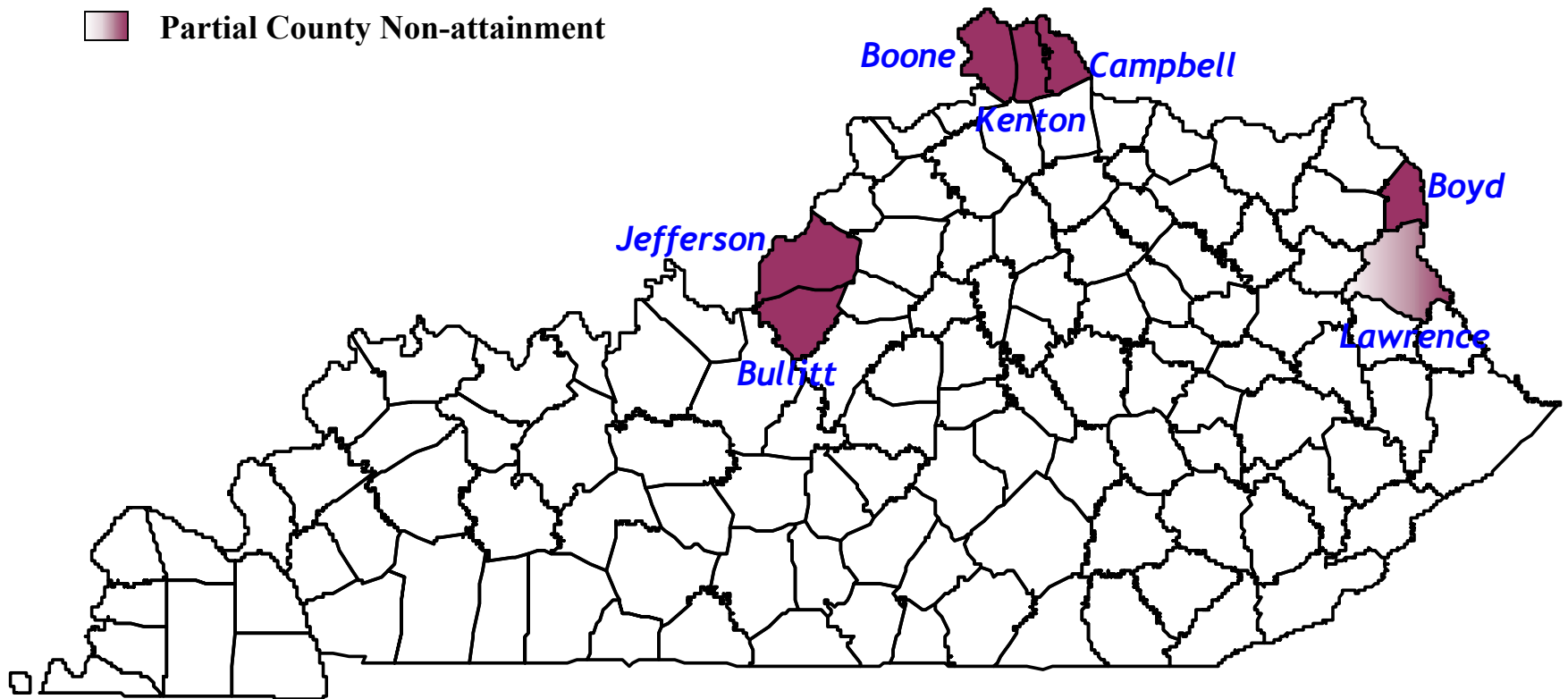


EPA's PM_{2.5} Non-attainment Designations

Published April 5, 2005

Based on 2002-2004 Monitoring Data

-  Full County Non-attainment
-  Partial County Non-attainment



Where Can You Burn Approved Materials?

- During fire season, at least 150 feet from the nearest forested area.
- Use common sense to locate fires away from nearby residences or businesses.
- Do **not** locate fires near streams, sinkholes, or under/over utility lines.
- Check to make sure local city/county ordinances allow burning.

What Burning Methods Are Allowed?

- Open fires
- 55-gallon drums used for comfort heat fires
- Approved burn chambers with stacks/chimneys
- Air Curtain Burners



Prohibited Burn Items




Open burning of the following items is
PROHIBITED at ALL TIMES!

Prohibited Burn Items...

- Tires
- Garbage
- Plastic
- Rubber
- Coated Wire
- Insulated wire
- Motor Oil
- Used Oil



Prohibited Burn Items: Construction/Demolition

- 
- Asbestos materials
 - Buildings (houses, barns, garages)
 - Construction debris
 - Demolition debris
 - Drywall
 - Shingles

Prohibited Burn Items: Wood



- Fence posts
- Painted wood
- Pallets
- Treated wood
- Wood mulch

Prohibited Burn Items: Agricultural

- Hay
- Animal bedding
- Muck piles (horse manure/hay)


Prohibited Burn Items:

- Agricultural chemical containers
- Household chemical containers



Most Open Burning is Not Necessary!

- 🔥 Brush could be composted, piled up for the wildlife, or simply left to decay.
- 🔥 Most debris can be recycled.
- 🔥 Debris that is not recyclable should be land-filled.
- 🔥 By making a few sensible choices, you can reduce the amount of disposable materials you create in the first place!

A large fire is burning, with thick black smoke rising into the sky. In the foreground, a building with a corrugated metal roof is visible, partially obscured by the smoke. The scene is set outdoors, with some greenery visible on the left side.

Illegal open burning could result in a fine of up to **\$25,000** per day per violation.

In addition to Division for Air Quality rules, other state and local regulations may apply. The Kentucky Division of Forestry and the State Fire Marshal's Office have regulations aimed at ensuring a blaze does not spread. Many city and county governments have ordinances regarding outdoor fires.

For More Information Concerning Recycling, Contact:

KY Division of Waste Management

Attn: Sara Evans

14 Reilly Road

Frankfort, KY 40601

Phone: (502) 564-6716 Fax: (502) 564-4049

Email: waste@ky.gov

Tire Amnesty Program!

<http://www.waste.ky.gov/programs/rcla/Tire+Amnesty.htm>

**Kentucky Recycling & Marketing Assistance Program
(KRMA):**


[http://www.waste.ky.gov/programs/rcla/Resource+
Conservation+Section.htm](http://www.waste.ky.gov/programs/rcla/Resource+Conservation+Section.htm)

**For more information concerning open
burning, please contact:**

Division for Air Quality (502) 573-3382

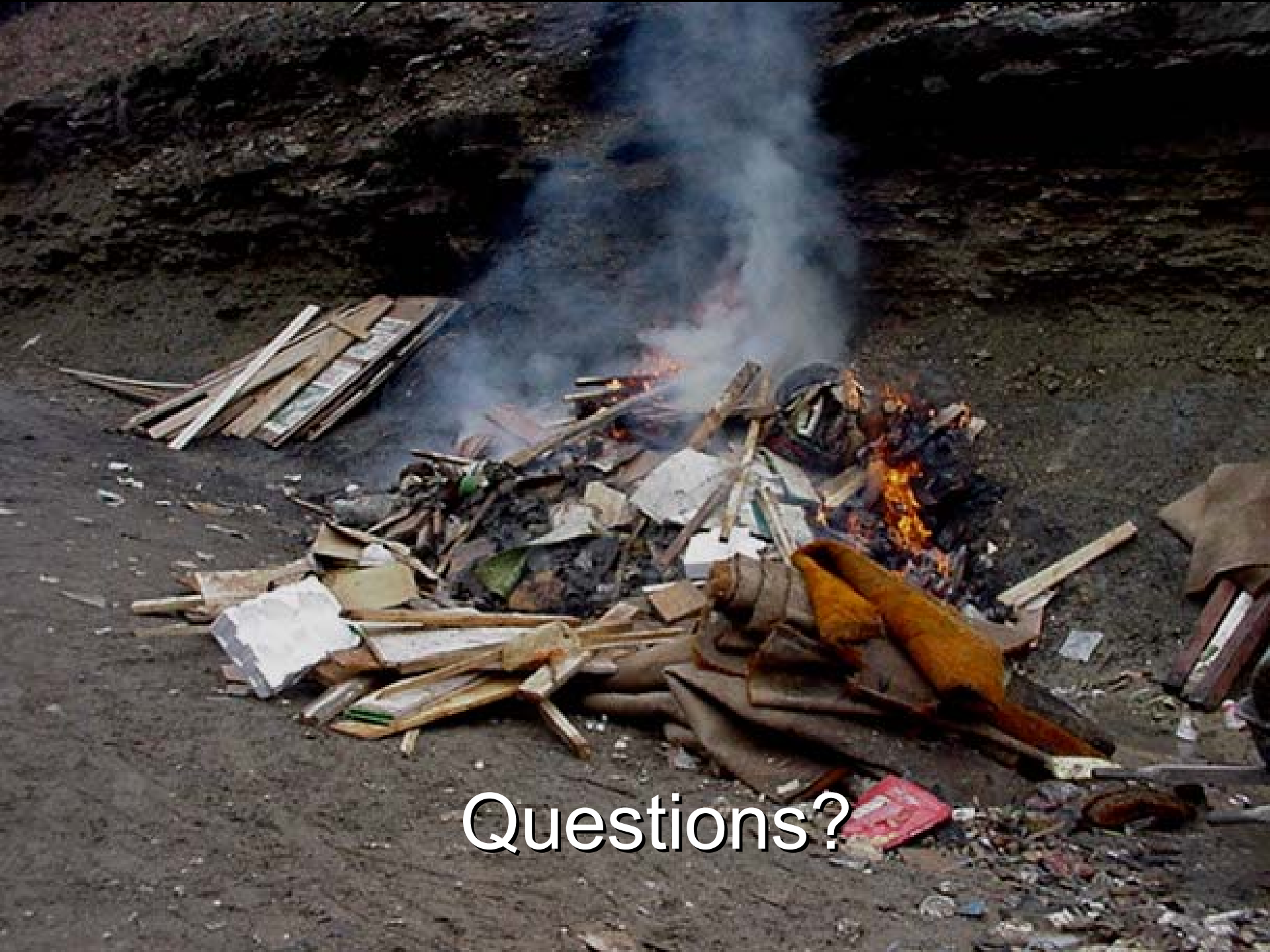
Or one of the Air Quality REGIONAL OFFICES

Ashland	VACANT	(606) 929-5285
Bowling Green	Bill Blacketer	(270) 746-7475
Florence	Clay Redmond	(859) 525-4923
Frankfort	Mark Ritter	(502) 564-3358
Hazard	Jack Hurt	(606) 435-6022
London	Mike Hannon	(606) 878-0157
Owensboro	Pat Barker	(270) 687-7304
Paducah	Bill Clark	(270) 898-8468



KY Division for Air Quality
803 Schenkel Lane
Frankfort, KY 40601
(502) 573-3382

<http://www.air.ky.gov>



Questions?